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BRIEFING FOR REGIONAL ADMINISTRATOR (5/19/2015)
Columbia Falls Aluminum Reduction Plant
Superfund Site, Montana

Personal Matters / Ex. 6

Site Description

- Site located in unincorporated Flathead County, MT (pop. 90,928) ~2 miles NE of Columbia Falls (pop. 1,150)
- 3,196-acre industrial property with numerous buildings and industrial operating facilities
- 953-acre historical operations area
- Site features include landfills, percolation ponds, leachate ponds, sludge ponds, sewage treatment ponds and cathode soaking pits

Aluminum Reduction Process and Spent Potliner Material

- Plant utilized aluminum reduction process to produce aluminum
- A byproduct of the process is spent potliner material (SPM)
- SPM is known to contain cyanide compounds that can leach into groundwater
- SPM = RCRA listed haz waste (RCRA code: KO88)
- SPM was disposed of in on-site landfills from 1950s to 1980s
- Fluoride sludge also was landfilled on site
- Cyanide and fluoride compounds are CERCLA hazardous substances



First metal from plant being loaded onto railroad cars by forklift operator on 8/24/1955

Attribution: Hungry Horse News (2015)

Potential Site Risks:

Preliminary Assessment / Site Investigation

- In 1984, MDHES performed a **Preliminary Assessment**
- In 1988, EPA conducted a **Site Investigation**, and classified the site as No Further Remedial Action Planned

Site Reassessment

- In 2014, EPA completed a **Site Reassessment** to identify types of hazards and document observed releases:
 - ✓ Groundwater: Cyanide / Fluoride exceed MCLs on site*
Cyanide: 1,040 PPB Max (MCL: 200; Background: 18.77)
Fluoride: 190,000 PPB Max (MCL: 4,000 Background: 100)
 - ✓ Surface Water / Flathead River:
Cyanide / Fluoride: Above background (sediment samples)
Fluoride: Above background, but below EPA SCDM and MDEQ Aquatic Life WQS benchmarks (water samples)
 - ✓ Surface Water / Cedar Creek:
Cyanide: Above background and exceeds all EPA SCDM and MDEQ Aquatic Life WQS benchmarks (water samples)

**2 of 5 sampled domestic wells had detectable cyanide levels, but were below MCLs; no municipal well contamination per routine SDWA monitoring*

Groundwater (Downgradient of Landfills)

Contaminants: Cyanide; fluoride; metals; pesticides

Sources: Leaching from landfills and sludge pond complex; percolation ponds and potentially other unknown sources (*indirect sampling only*)

Surface Water (Cedar Creek and Flathead River)

Contaminants: Cyanide; fluoride; metals

Sources: Groundwater infiltration; groundwater seeps

Percolation Ponds (Water and Sediment)

Contaminants: Cyanide; fluoride; semi-VOCs; metals; pesticides

Sources: Aerial deposition; ponds received process fluids that have since (partially) evaporated or percolated

NPL Listing:

- HRS Score: 68.39 (groundwater + surface water pathways)
- Finalize NPL listing no sooner than 10/2015
- ≥ 1 year if significant public comment

Community Engagement:

- EPA Communications Strategy with targeted NPL outreach
- EPA and State public meetings
- Outreach to local, state and federal officials